

Watershed Assistance Grants

2004 Drinking Water Source Protection
Workshop

May 19, 2004

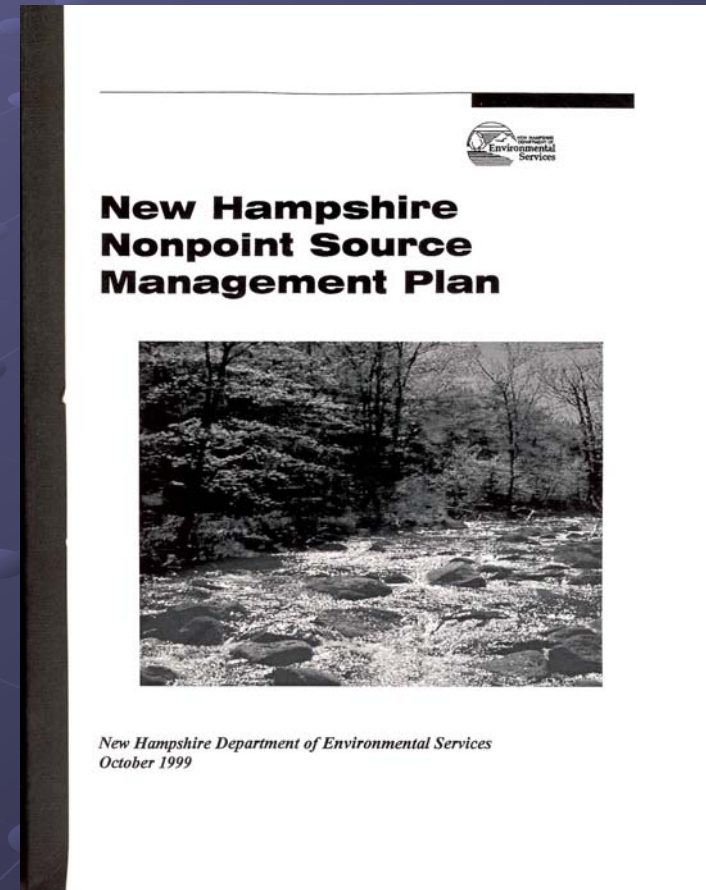
**Eric Williams, Supervisor, Watershed Assistance
Program, DES**



Source and Use of Funds

for Watershed Assistance Grants

- “Section 319” of the Clean Water Act
- Address Nonpoint Source Pollution
- Consistent with state NPS Plan



State Goals for WAGs

- Implement a Watershed Approach
- Attain Water Quality Standards
- Partner Involvement
- Measurable Results



Types of WAGs

Grant Program	Annual \$
Base Program	\$310,000
Watershed Restoration Grants	\$500,000
Small Education and Outreach Grants	\$20,000
Agricultural Nutrient Management Grants	\$75,000

Eligible Applicants

- Towns,
- Conservation Districts,
- Regional Planning Agencies,
- Watershed Associations,
- Non-Profits, and
- State Agencies
- Farmers (for ANMGs only)

WAG Program Requirements

- 40% Nonfederal Match
- Competitive Bidding
- Contract with Deliverables
- Meet EPA Guidance
(www.epa.gov/owow/nps/cwact.html)
- Measure Results

Base Grants

- **Must address water quality goals** 💧
- Use watershed approach
- \$310,000 annually
- RFP issued each September
- Proposals due in November
- Eligible activities:
 - BMPs
 - Watershed Plans
 - Outreach
 - Organization building
 - Stormwater (outside of Phase II)



Watershed Restoration Grants

- **Must address water quality goals** 💧
- **Impaired Waters Only**
(see www.des.nh.gov/wmb/swqa/)
- **\$500,000 annually**
- **RFP to go out June 2004**
- **Must implement watershed-based plan**



Watershed-based Plan

- ID pollution sources
- Estimate load reductions
- ID BMPs
- ID Resources needed
- Outreach
- BMP schedule
- Interim milestones
- Criteria for success
- Monitoring plan

Small Outreach and Education Grants

- **Must address water quality goals** 💧
- To convey your watershed message
- Up to \$2,000 – 40% Match
- Ongoing - Part of 319 Program
- Eligible products:
 - Publications
 - Mailings
 - Public events
 - Web sites
 - Displays



Agricultural Nutrient Management Grant Program

- Partnership between Dept of Ag and DES
- **Targeted at water quality problems**
- \$75,000 available to implement BMPs
- \$2,500 maximum grant
- Applications accepted any time
- Funding allocated December 1 and June 1



Moose Plate Grants

- **For Conservation Projects**

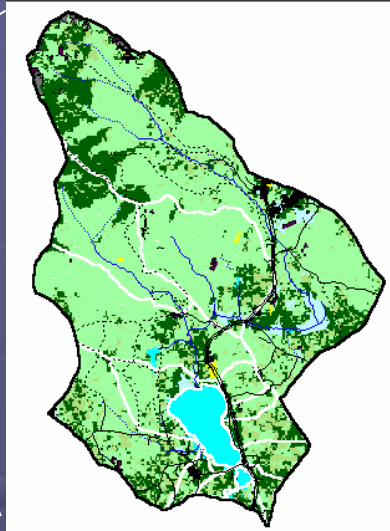
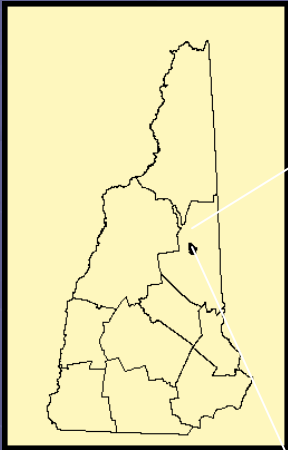
- Physical, Tangible Results
- \$150,000 available annually
- 2 Programs:
 - County Conservation Grants
 - Local Conservation Grants
- RFP in October
- Proposals due December 2, 2002
- www.mooseplate.org



Successful Proposal Tips

- Read the RFP Carefully
- Have Clear Goals
- Have Project Purpose Meet Grant Program Purpose
- Identify Project Partners & Local Support
- Articulate Specific Tasks
- Show Measurable Results
- Be Realistic
- Plan Each Step
- Plan for Sustainability
- Call for Help!

Agency and Local Partnerships Deliver: The Chocorua Lake Project



BACKGROUND:

- Chocorua Lake as “icon”
- Water Quality declining
- Sediment plumes from highway runoff
- High phosphorus near Route 16.



NH Conservation Partnership

- North Country Resource Conservation and Development Agency (USDA NC RCD)
- Carroll County Conservation District (CCCD)
- Lakes Region Planning Commission (LRPC)
- New Hampshire Department of Environmental Services (DES)
- NH Department of Transportation (DOT)
- USDA Natural Resources Conservation Service (NRCS)
- University of New Hampshire (UNH) Cooperative Extension (CEx)
- UNH Center for Freshwater Biology (CFB)
- NH Americorps Volunteers

Lake Chocorua Project Partners:

Lake Chocorua Association

Town of Tamworth

Chocorua Lake Conservation Foundation

Bringing All of the Players to the Table



Even the (perceived) bad dogs!

The Catch:

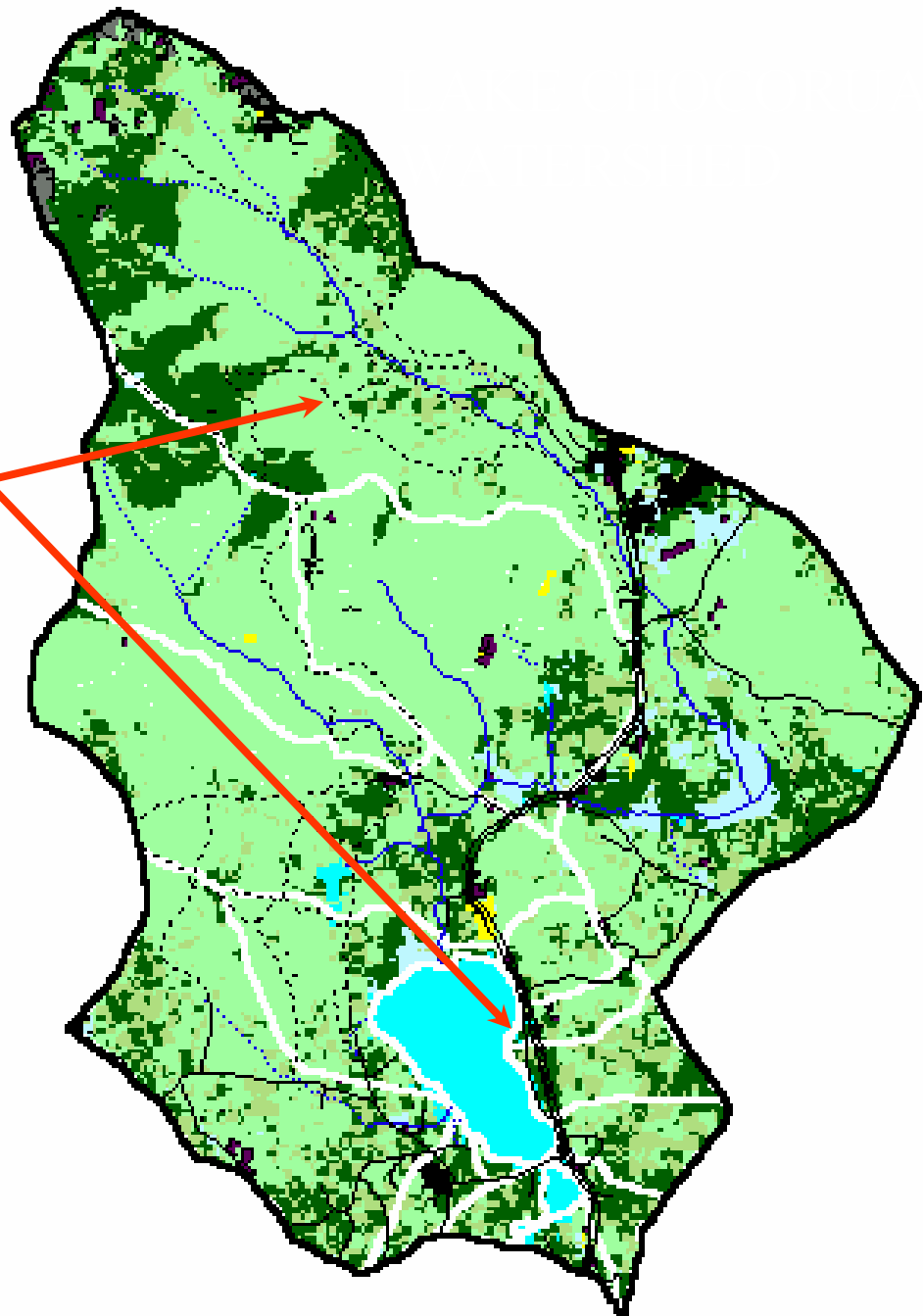
NH DOT was not convinced that the Route 16 runoff and drainage was a primary cause for the erosion, sedimentation and increase in nutrients to the lake.



Route 16 Drainage

Subwatersheds

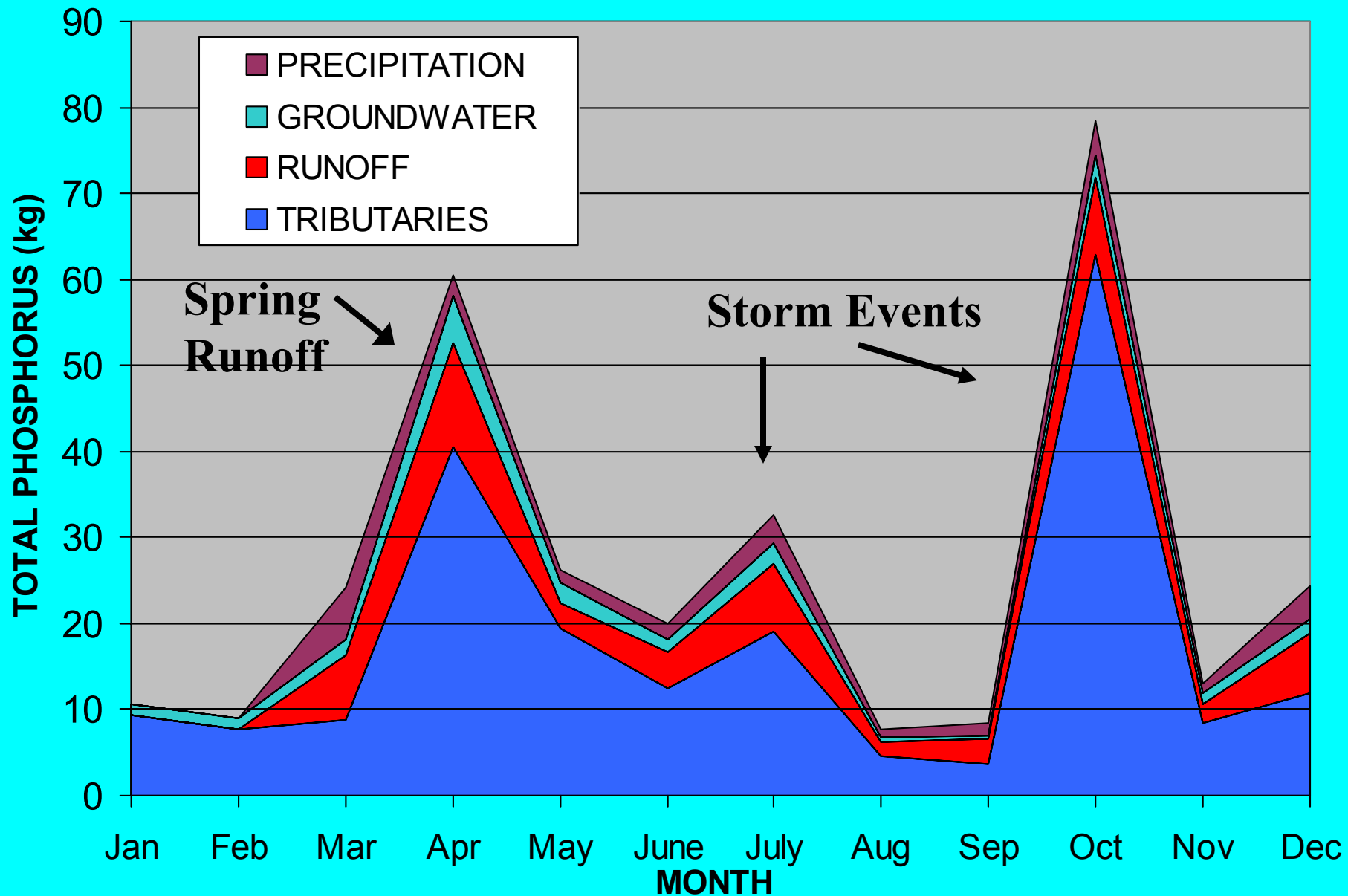
**Volunteer Assisted Watershed
Study by UNH**



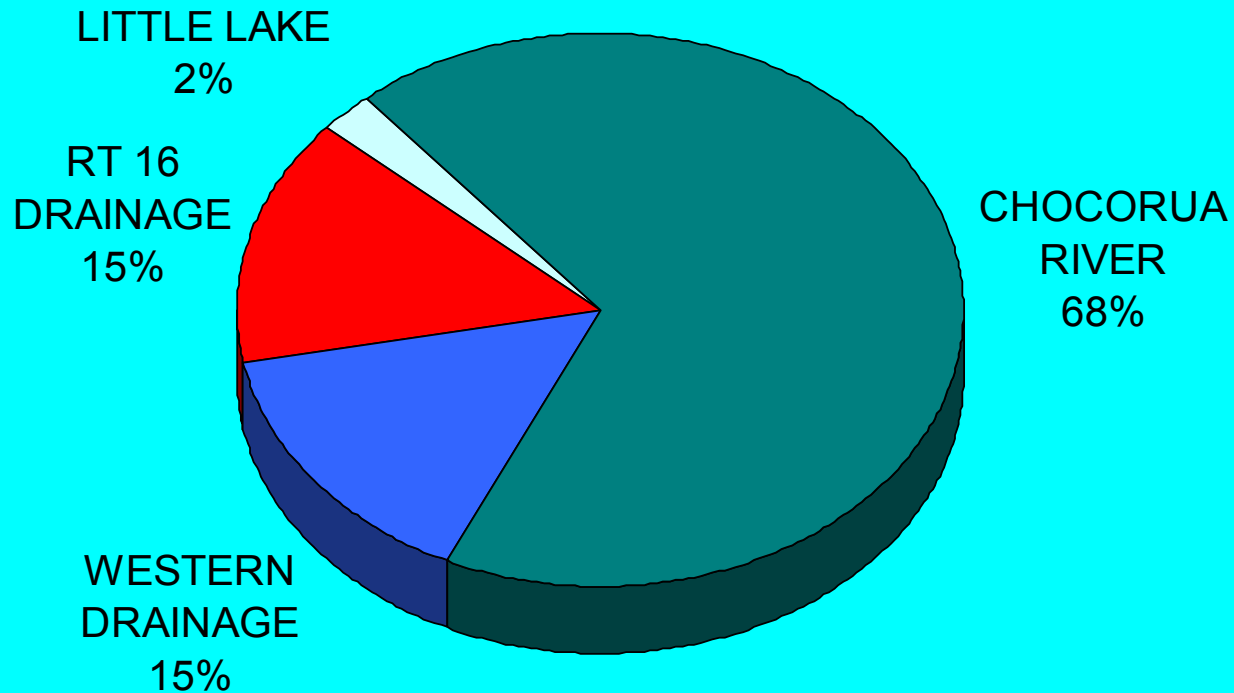
Tributary Sampling/Nutrient Budget



MONTHLY PHOSPHORUS LOADING BY SOURCE



CHOCORUA LAKE PHOSPHORUS LOADING BY DRAINAGE AREA



In the end, DOT agreed to mitigate as long as we agreed they were not the greatest TP contributor

BMP Work:

- New culverts and culvert extensions
- Diversion ditches



BMP Work:

- Stone-lined waterways
- Plunge pools/sediment basins



BMP Work:



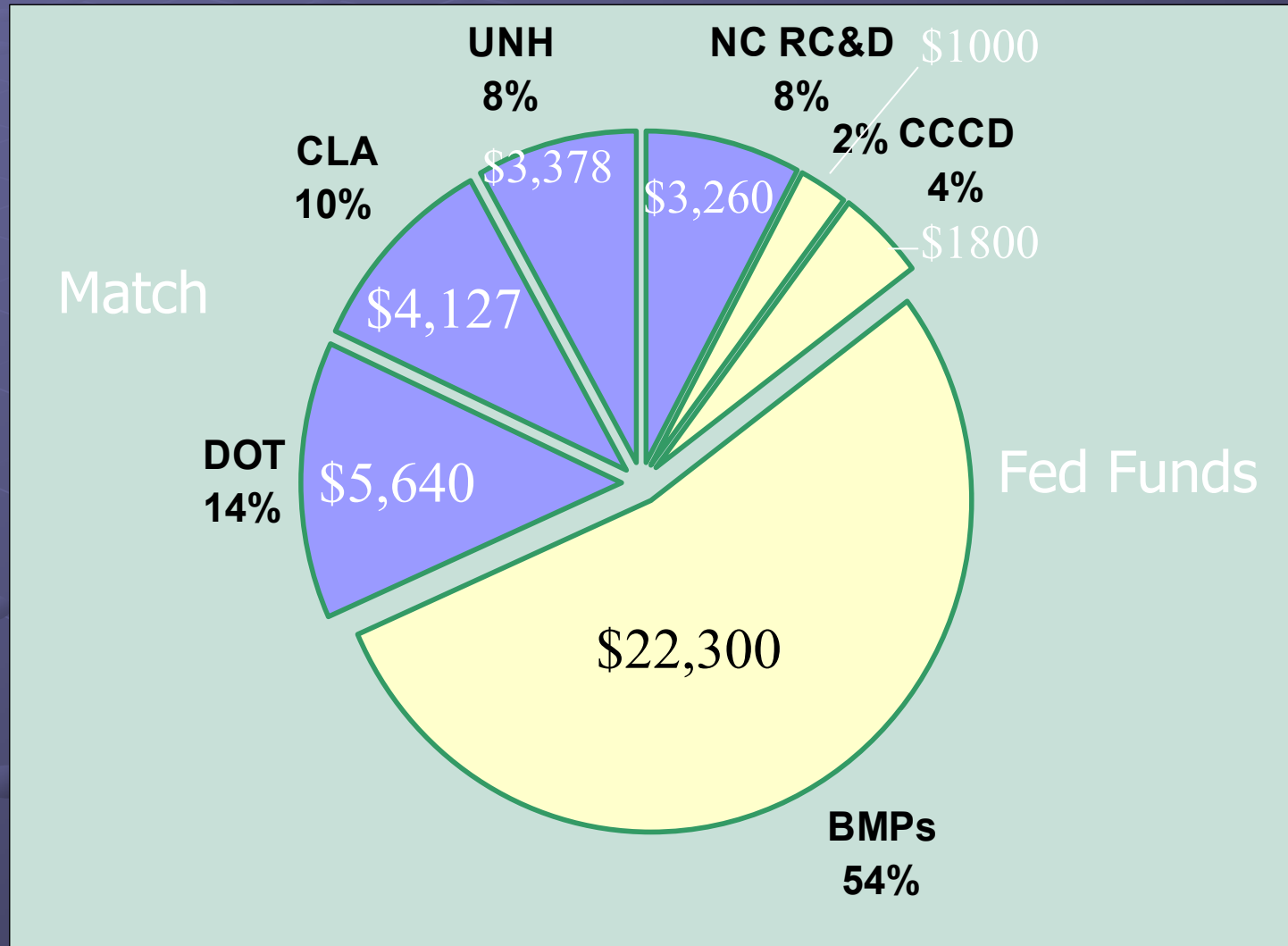
PHASE 1

Fed= \$23,300

Match= \$16,405

Total= \$39,705

Budget and Cost Share



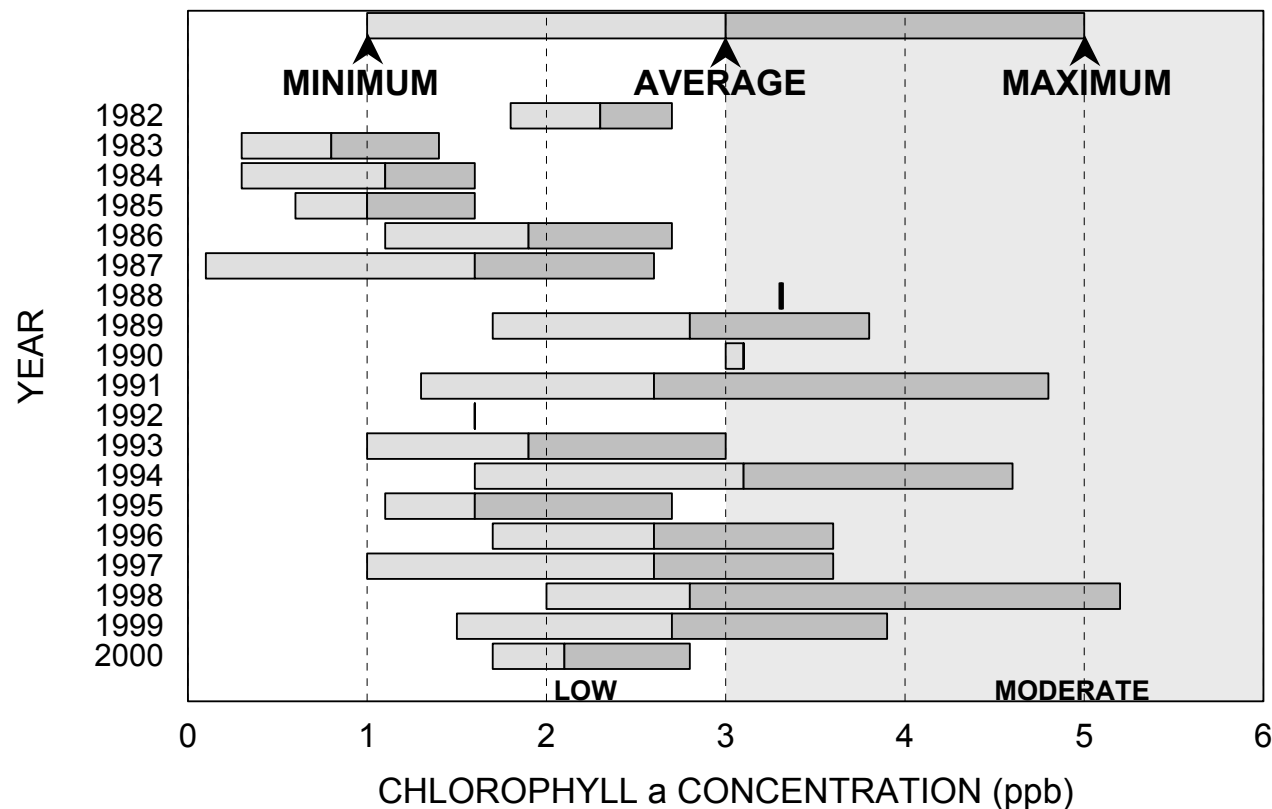
Measured Results:

- Significant reduction in phosphorus.
- Stabilization and protection of a highly popular tourist destination.
- Maintained recreational uses.
- Increased enjoyment of Lake Chocorua by area residents and visitors.



Chocorua Lake Long-Term Water Quality Data

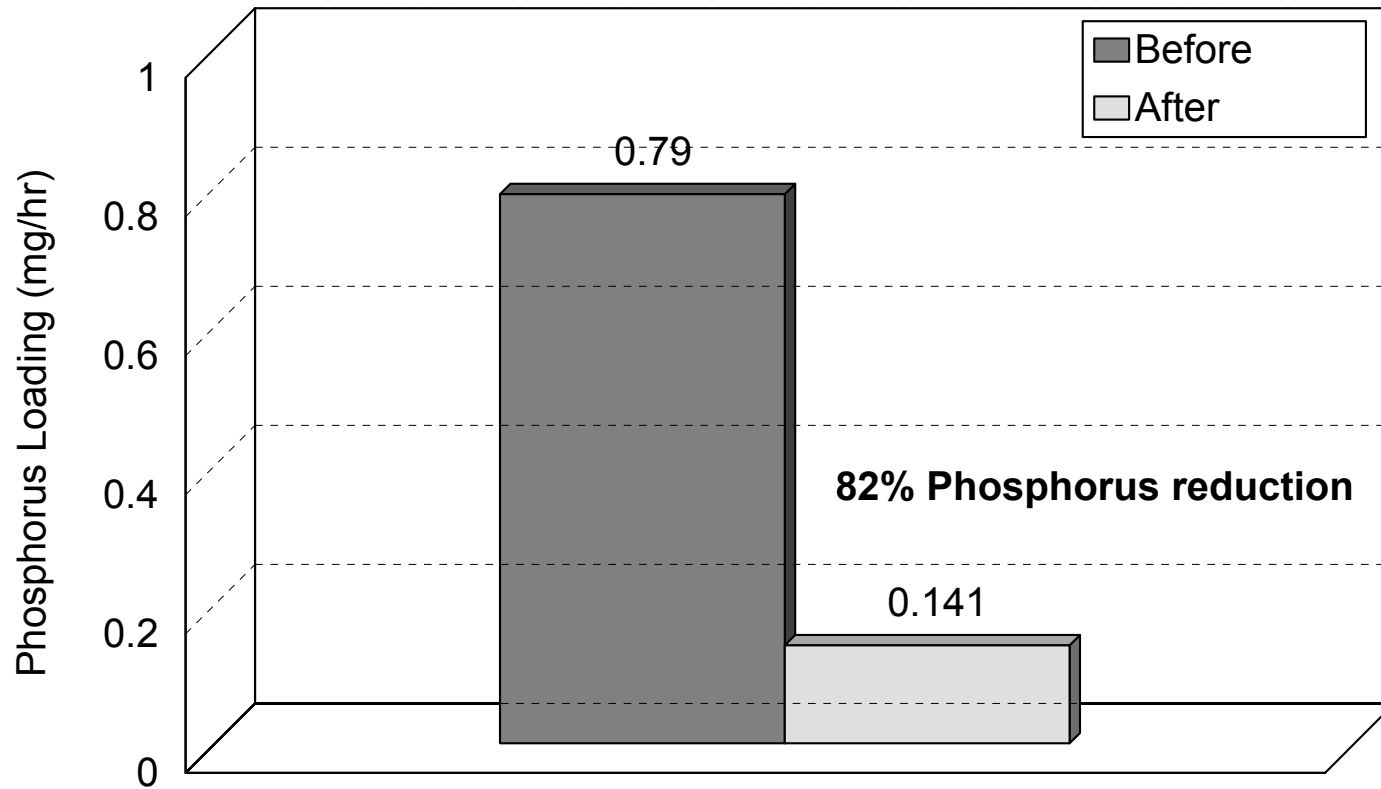
CHOCORUA LAKE - SITE 1 SOUTH LAY MONITOR CHLOROPHYLL *a* DATA YEARLY COMPARISONS (1982-2000)



Note: The higher value = more algal growth (e.g. greener water)

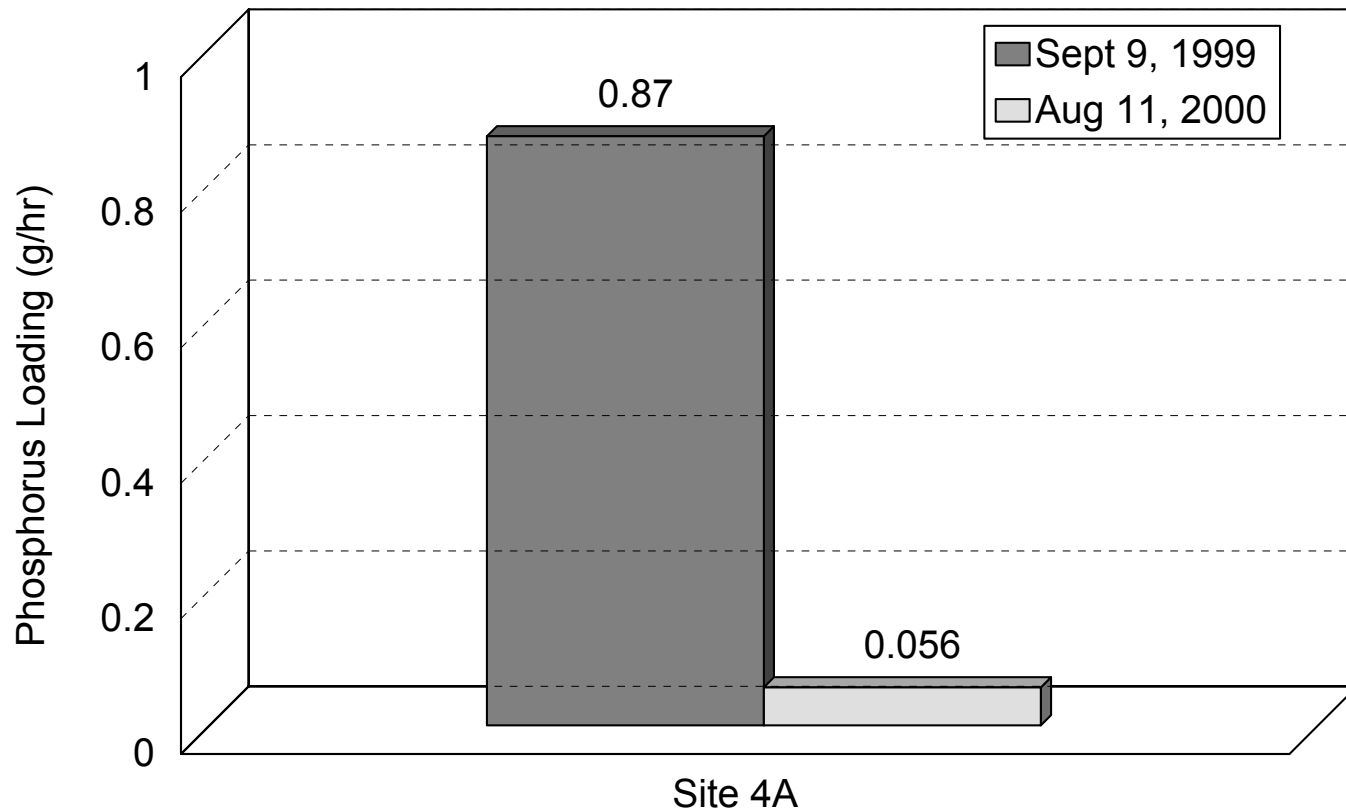
Results

Site 5A: Before and After BMP Implementation



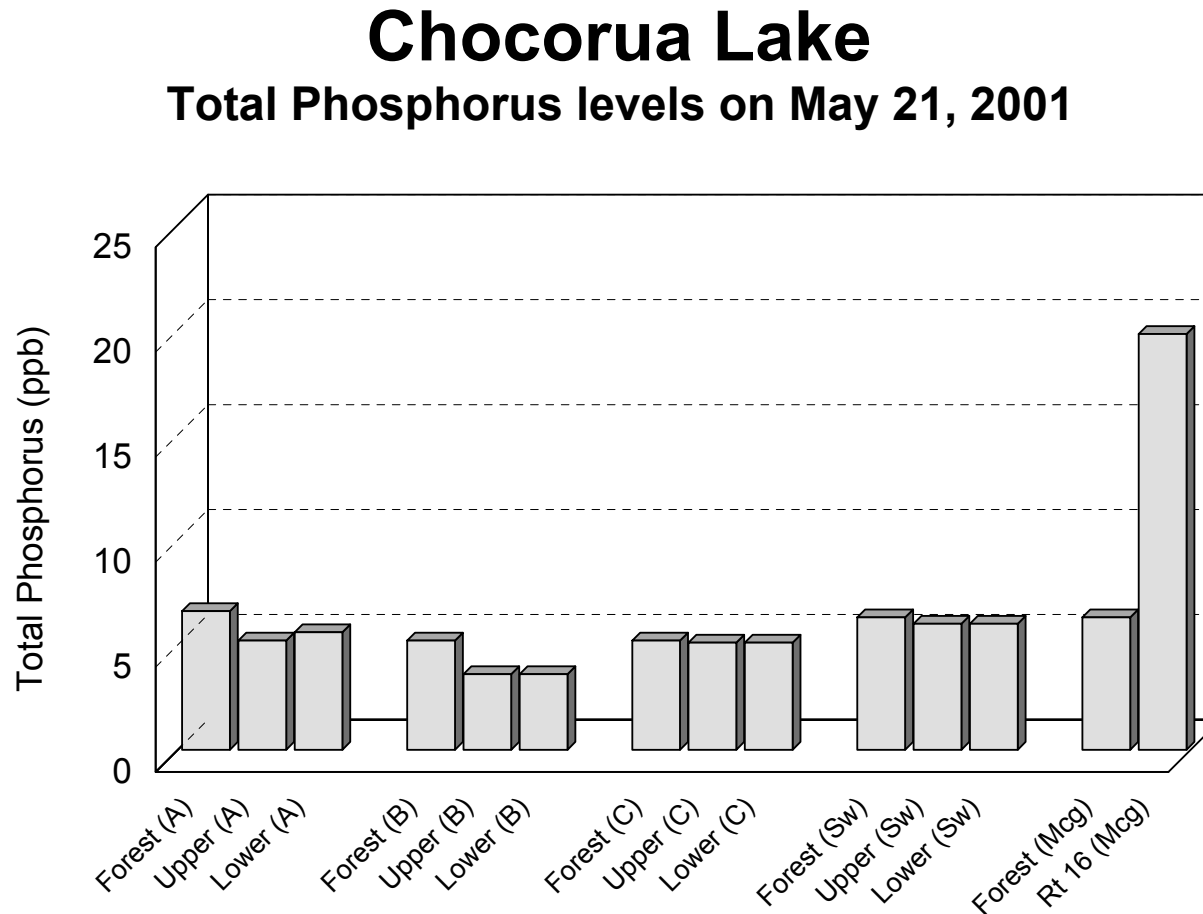
Intense Storm Event Sampling

Before (1999) and After (2000) BMP Implementation



Note: 4" rainfall on September 9, 1999
1.35" rainfall within 1/2 hour on August 11, 2000

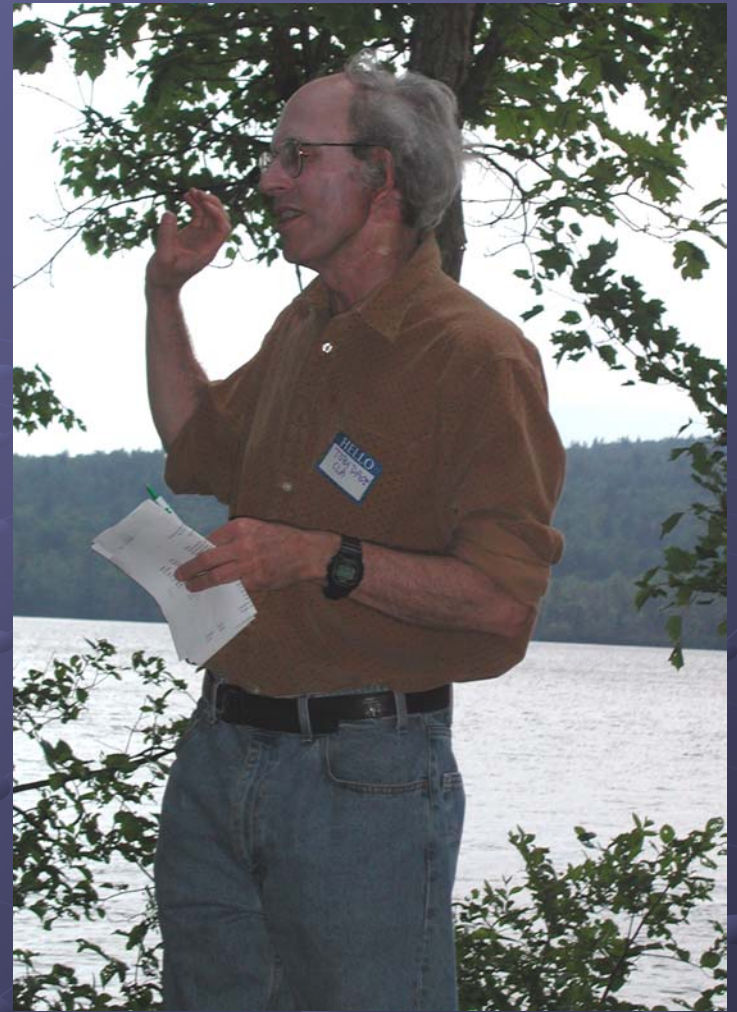
Notice: Phosphorus values near lake (lower) are near/below levels documented at the forested (reference) location indicating particulate debris were effectively removed by the BMPs. No BMPs were instituted at the McGregor Hill Road (Mcg) where the phosphorus concentrations are nearly 4 times higher than the values documented at the other sites.



Dedication Ceremony 2000



“I don’t know
when was the last
time I’ve worked
with 12 agencies
and gotten
something done”



*-Toby Page
Lake Chocorua Association*

Oct 31, 2002 Signing Ceremony





Chocorua Phase 2:

- Monitor effectiveness of BMPs
- Deep and shallow lake nutrient monitoring
- Wetland assimilation/productivity studies
- Additional road improvements / BMPs



Chocorua Phase III:

- Address dirt roads in western watershed
- Install BMPs:
 - Turn-outs
 - Sediment basins
 - Diversions
- Conduct a demonstration workshop on gravel road maintenance

Chocorua Phase IV: (planned)

- Investigate use of warm-seasons grasses on eroded sites along Route 16
- Install BMPs at McGregor Hill Road drainage
- Work with Town to insure proper maintenance of gravel roads and BMPs

Lessons Learned:

- Clear water quality goals
- Regular communication
- Sound science
- Address multiple needs
- Good facilitation gets results
- Give partners the recognition they deserve
- Stakeholder buy-in





31.10.2002